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Forage News [2009-08]

Department of Plant and Soil Sciences, University of Kentucky

COOPERATIVE EXTENSION SERVICE • UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE • LEXINGTON, KY, 40546

FORAGE NEWS

UNIVERSITY OF KENTUCKY College of Agriculture

Research & Education Center
Princeton, KY 42445

For more forage information, visit our UK Forage Extension Website at: **http://www.uky.edu/Ag/Forage**

August 2009

Garry D. Lacefield and S. Ray Smith, Extension Forage Specialists • Christi Forsythe, Secretary

KFGC Field Day is September 3

The Kentucky Forage and Grassland Council Field Day will be held September 3 on the James R. Smith Farm in Lawrenceburg. County Agent Tommy Yankey and all the group have done an outstanding job planning and preparing for this event. It will start at 4:00 p.m. with registration. Tours start at 5:15. Tour stops and speakers include:

1 11 Acres of Eastern Gamagrass Interseeded with Red Clover and Pasja Forage Turnips for Summer Grazing –
Dr. Glen Aiken, USDA Agricultural Research Service, Animal Scientist
2 Alfalfa/Orchardgrass Hay Production and Management –
Dr. Garry Lacefield, Extension Forage Specialist
3 Field Corn Planted for Grazing in Fall/Winter –
Tommy Yankey, Anderson County Extension Agent for Agriculture
4 Renovating Fescue Pastures –
Dr. Ray Smith, Extension Forage Specialist
5 Watering Systems for Rotational Grazing –
Ralph Quillin, Kentucky Graziers Supply
6 Balancing Nutritional Requirements when Grazing Field Corn –
Dr. Jeff Lehmkuhler, Extension Beef Specialist

Supper will be prepared and served by the Anderson County Cattlemen's Association. For more information about the program and directions to the farm, see our website http://www.uky.edu/Ag/Forage

Forage Spokesman Nominations

Nominations are being received for the 2009 KFGC Awards and Forage Spokesman. Awards will be given to deserving individuals representing producers, industry, public (State & County). We also need nominations for our Forage Spokesman Contest to be held in conjunction with the 10th Kentucky Grazing Conference in Princeton on October 29. To nominate a producer, send a one-page nomination to Dr. Ray Smith, raysmith1@uky.edu or mail to Plant and Soil Science Dept., 105 Plant Science Bldg., 1405 Veterans Road, University of Kentucky, Lexington, KY 40546-0312.

UK All Commodity Field Day

Near perfect "Field Day weather" was observed by those attending the 2009 U.K. All Commodity Field Day at Princeton on July 23. Participants had the opportunity to choose among eleven different tours, attend many workshops and demonstrations and visit over 80 different exhibits in the Exhibit, Family and Consumer Sciences and Youth Areas. Several new features were added for the 2009 event, including a new tour featuring Equine Pasture Management, along with several additions in the Youth and FCS Area. Food was available from the Kentucky Beef Cattle Association, Kentucky Pork Producers Association and the Kentucky Poultry Federation. The next U.K. All Commodity Field Day at Princeton will be July 2011.

Charles Powell National Hay Winner

Charles Powell, Alfalfa producer from Christian County (Hopkinsville), placed second nationally at the American Forage & Grassland Council Alfalfa Hay Quality Contest in Grand Rapids Michigan. Charles has received many awards over the years at the Kentucky Alfalfa Hay Contest and we are so proud to see him recognized on the National level. Congratulations Charles!

Check 2008 Variety Trial Reports Before Buying Seed

Make sure to check the 2008 Forage Variety Reports before buying seed for fall planting. There are 14 separate reports covering all the major forage species with information on yield and tolerance to grazing. Check with your county agent or see the Forage Website (www.uky.edu/Ag/Forage) for all the 2008 reports or to review reports from past years. We encourage you to first review the report entitled "Long Term Summary of Forage Variety Trials" as it includes summary information from all the other reports. Then refer to the individual forage species reports for more detailed information.

What Does the Intensive in Intensive Grazing Mean

Intensive grazing systems have been promoted for quite a few years, but do you know what the word intensive means when it is used with grazing? Stay tuned – you might be surprised.

What do you think of when you hear the phrase 'intensive grazing'? Many small pastures with lots of fencing? Moving animals to new pastures almost daily? Lots of animals completely grazing small areas before moving to fresh pasture?

Most folks don't fully understand what the word 'intensive' is meant to refer to. It's not intensive fencing. It's not intensive labor or animal movement. And it's especially not intensive defoliation. Intensive is all about management.

Begin by deciding your goals and what you want to accomplish with your grazing. If you want maximum production and are willing to make the needed investment in labor and materials, then dividing your grazing land into many smaller pieces is likely to be one of your needs. But most important is how you manage the grazing of each individual small pasture as well as combine all the small pastures into one management unit.

The biggest mistake I see people make is to think that intensive grazing means you should graze each small pasture real short before moving to the next pasture. Nothing could be further from the truth. Sometimes severe or short grazing may be appropriate, but more often than not we want to leave more grass behind after a move so it will regrow faster and be ready for another grazing sooner. Thus, it's the intensity of your management that enables you to meet your grazing goals.

Intensive grazing is a great tool when used correctly. Remember – it is management, not the defoliation, that is intensive. *(SOURCE: Bruce Anderson, Extension Forage Specialist, University of Nebraska)*

Grazing and Eliminative Behavior of Horses Grazing Bermudagrass

ABSTRACT: Hummock patches of bermudagrass resulted from herbage growth stimulated by urinary N. Mares stopped grazing momentarily during urination, but defecated in motion, hence the spatial arrangement of hummocks reflected the pattern of grazing. Mares sought out and grazed down bermudagrass herbage growing over urine deposits in a classic patch grazing behavior, albeit the reciprocal of dogma. Grazing patterns indicate that mares used a strategy in line with foraging theory, i.e. they grazed hummocks because they could maximize energy intake with least expenditure of energy. The behavior of mares in the rotational grazing system refutes

the concept that confinement and high stocking rates or stocking densities cause the "lawn and rough" landscape. In three years of grazing bermudagrass we never observed mares moving from areas of grazing to areas dedicated to urination and defecation, i.e. "latrine behavior". The amount of N and K excreted in as few as three urinary events per day over small area (each about 2 ft2) was equivalent to broadcast applications of over 2.5 tons/A of urea fertilizer and 2 tons/A of KCL. Our data indicates that urination of grazing mares may contribute to nitrate and K in ground water in the absence of active pasture growth. *(SOURCE: C.T. Dougherty, R.L. Coleman and E.S. Flynn, University of Kentucky IN Proceedings 63rd Southern Pasture and Forage Crop Improvement Conference, Lexington, KY 2009)*

Results of the 1st Year for a Grazing Evaluation of KYFA9302 Tall Fescue, With and Without the AR584 Novel Endophtye

ABSTRACT: A wild-type endophyte (*Neotyphodium coenophialum*) that infests tall fescue (*Lolium arundinaceum*) imparts tolerances to environmental stresses, but also produces ergot alkaloids that adversely affect performance and physiology of cattle. Novel endophytes have been developed that do not produce toxic alkaloids. A 2yr grazing experiment is being conducted to evaluate weight gain and physiology for yearling steers grazing a novel endophyte tall fescue, AR584-KYFA9301 (NE9301; not commercially released), in comparison with AR542-'Jesup' (MaxQ), endophyte-free KYFA9301 (EF9301), and wild-type 'Kentucky 31' (KY31) tall fescues. Entries were assigned to 1.0-ha pastures in a completely randomized design with three replications. Pastures were planted in September of 2006. Grazing with variable stocking (4 testers) was initiated in 2008 in May and terminated in July. Shrunk bodyweights were taken at the beginning and end of the grazing season. Rectal and skin temperatures were recorded on days 28, 56, and 77. Average daily gains were similar ($P < 0.05$) among MaxQ (0.87 kg/d), NE9301 (0.74 kg/d), and EF9301 (0.74 kg/d), which were greater ($P < 0.05$) than KY31 (0.57 kg/d). Rectal and skin temperatures among NE9301, EF9301, and MaxQ were similar ($P > 0.10$), and these measures for the non-toxic entries were less ($P < 0.05$) than for KY31. Carrying capacities were similar ($P > 0.10$) among entries (431 ± 19 steer d/ha). Results in the first year indicated steer performance and body temperature responses for NE9301 and EF9301 were similar to those for MaxQ. (Jennifer Johnson, G. Aiken, Tim Phillips, and Mike Barrett IN Proceedings 63rd Southern Pasture and Forage Crop Improvement Conference, Lexington, KY 2009)

Cutting Ash Content

If you have clouds of dust trailing your rake, you're probably adding unnecessary ash to your forage. That can lower its quality and, if it's fed to dairy cows, the amount of milk produced, says Dan Undersander, extension forage specialist at the University of Wisconsin (UW).

A certain amount of ash is unavoidable. Grass plants contain about 6% ash, and alfalfa holds nearly 8%. But the harvesting and handling of hay or silage, on average, adds 4% more ash, for an average of 10-12% ash, according to UW-Marshfield lab results. That's about 2% too much, Undersander believes. Some results show even higher amounts of ash – one sample contained 18% ash, he says. "That guy was feeding 1 lb of dirt for every 4 lbs of hay. Do you think his cows produced a lot of milk? I suspect not," he says.

By limiting added ash to just 2%, "you've improved the quality of your product," Undersander adds.

Here are his suggestions to meet that goal:

- Cut the crop at least 3-3½" high. "If you cut alfalfa shorter you get a little more tonnage, but as you go below 3", especially when the soil is dry, you're going to be picking up more dirt."
- Change your disc mower knives from standard to flat. "The standard knife has a 14-degree angle and it creates a little vacuum. On first cutting when the ground is we, it doesn't make any difference; on second and third, when the ground is dry, you can easily pick up 1-2% ash."
- Switch from narrow to wide swaths if you haven't already.

"When you go to a wide swath, that swath stays on top of the stubble. If you make a narrow windrow it sinks down onto the ground, and when you pick up the windrow, you see a layer of dirt on the underside."

- Keep rake tines from scraping the ground. "It's worthwhile to have a level field," he adds.
- Be careful when feeding out of bunker silos on bare ground during rainy weather.

"This is one of the reasons why we've always encouraged people to put their bunkers either on asphalt or concrete," says Undersander. *(SOURCE: Fae Holin, Hay & Forage Grower, February 2009)*

Late Summer Nitrogen Applications to Pastures – Will they Pay this Year?

We are close to the point where some livestock farmers would normally start to apply nitrogen to tall fescue pastures to boost production levels and stockpile for fall and winter grazing. There were few opportunities for this practice the last two years due to the dry weather, but 2009 has good potential due to the favorable soil moisture conditions. Since there are many factors that will impact the profitability of this practice, the question at hand is: Under what set of conditions will applying nitrogen to pastures pay this year?

To help answer this question, the cost of stockpiling was compared to the cost of feeding hay on a per day basis. Each additional grazing day resulting from nitrogen applications will save the farmer from feeding hay. The trick is to figure out at what point would adding additional grazing days be more expensive then feeding hay.

The price of nitrogen was evaluated on an elemental basis between $.40-.60 per unit ($270-400 per ton ammonium nitrate). Three response rates (low, medium, and high) were evaluated corresponding to various soil moisture conditions. The application cost for spreading the nitrogen was set at $5/acre.

Farm size and management practices were set at typical Kentucky conditions: 30 cow herd with late winter/early spring calving. Waste rates were estimated at 35% for both hay feeding and grazing. Machinery and labor costs were estimated at $.06 and $.25 per cow-day for grazing and hay feeding respectively. P and K from the hay were assumed to be recycled back into pastures at a 50% rate.

A range of hay prices were evaluated to determine which prices, if any, would result in profitable nitrogen applications this year. In general, Good opportunities for applying nitrogen and stockpiling exist in mostly pure fescue stands (stands with few weeds and clover). Significant savings are possible where hay is priced at $60/ton in areas with average soil moisture conditions (medium response rate), and $45/ton in areas with ideal soil moisture conditions (high response rate).

Fewer cost saving opportunities exist for nitrogen applications in mixed fescue-clover stands (clover content greater than 20%). Assuming average soil moisture conditions for this time of year (medium response rate), hay prices will need to be around $90/ton before significant savings occur, while hay prices will need to be around $75/ton with ideal soil moisture conditions in these mixed stands (high response rate). Additionally, any potential savings in these fescue-clover stands need to be balanced against the potential loss of clover due to N applications. As a consequence, the general consensus among agronomists that reviewed these results is that mixed fescue-clover stands would not be good candidates for N applications this summer.

In the most likely situations evaluated, optimal application rates ranged from 50-105 units per acre with nitrogen priced at $.60 per unit. For more detailed results, consult the publication "Optimal Nitrogen Application Rates for Stockpiling Tall Fescue Pastures – 2009 Guide" (AEC 2009-09) which can be found on our Forage Website at: http://www.uky.edu/Ag/Forage/ForagePublications.htm (SOURCE: Greg S. Halich, UK Dept. of Ag. Econ.)

Upcoming Events

SEP 3	KFGC Field Day, Anderson County
SEP 17-19	National Hay Association Annual Conference, Deadwood, SD
SEP 19	Asbury Draft Horse Day, Asbury College Equine Center, Wilmore, KY
OCT 29	10th Kentucky Grazing Conference, UK Research & Education Center, Princeton
2010	
JAN 15	Forages at KCA, Lexington
FEB 25	30th Anniversary: Kentucky Alfalfa Conference, Cave City Convention Center

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